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 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2  Dec 17   The CA Lexicon available in the CAPLUS and CA files
 NEWS  3  Feb 06   Engineering Information Encompass files have new names
 NEWS  4  Feb 16   TOXLINE no longer being updated
 NEWS  5  Apr 23   Search Derwent WPINDEX by chemical structure
 NEWS  6  Apr 23   PRE-1967 REFERENCES NOW SEARCHABLE IN CAPLUS AND CA
 NEWS  7  May 07   DGENE Reload
 NEWS  8  Jun 20   Published patent applications (A1) are now in USPATFULL
 NEWS  9  JUL 13   New SDI alert frequency now available in Derwent's
                   DWPI and DPCI
 NEWS 10  Aug 23   In-process records and more frequent updates now in
                   MEDLINE
 NEWS 11  Aug 23   PAGE IMAGES FOR 1947-1966 RECORDS IN CAPLUS AND CA
 NEWS 12  Aug 23   Adis Newsletters (ADISNEWS) now available on STN
 NEWS 13  Sep 17   IMSworld Pharmaceutical Company Directory name change
                   to PHARMASEARCH
 NEWS 14  Oct 09   Korean abstracts now included in Derwent World Patents
                   Index
 NEWS 15  Oct 09   Number of Derwent World Patents Index updates increased
 NEWS 16  Oct 15   Calculated properties now in the REGISTRY/ZREGISTRY File

 NEWS EXPRESS  August 15 CURRENT WINDOWS VERSION IS V6.0c,
               CURRENT MACINTOSH VERSION IS V6.0 (ENG) AND V6.0J (JP),
               AND CURRENT DISCOVER FILE IS DATED 07 AUGUST 2001
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
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                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.15       0.15

FILE 'REGISTRY' ENTERED AT 17:11:28 ON 17 OCT 2001
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STRUCTURE FILE UPDATES: 16 OCT 2001 HIGHEST RN 362587-51-7
DICTIONARY FILE UPDATES: 16 OCT 2001 HIGHEST RN 362587-51-7

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

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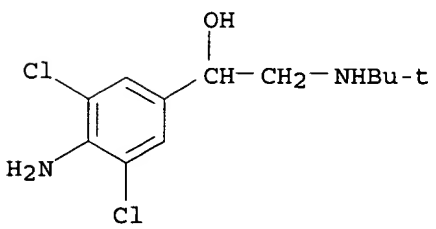
Crossover limits have been increased. See HELP CROSSOVER see HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s clenbuterol/cn
L1 1 CLENBUTEROL/CN

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 37148-27-9 REGISTRY
CN Benzenemethanol, 4-amino-3,5-dichloro-.alpha.-[[(1,1-dimethylethyl)amino]methyl]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN (.+-.)-Clenbuterol
CN (RS)-Clenbuterol
CN 1-(4-Amino-3,5-dichlorophenyl)-2-(tert-butylamino)ethanol
CN **Clenbuterol**
CN dl-Clenbuterol
CN P 5369
CN Planipart
FS 3D CONCORD
DR 50306-01-9
MF C12 H18 Cl2 N2 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, PHAR, PHARMASEARCH, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXLINE, TOXLIT, ULIDAT, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

1066 REFERENCES IN FILE CA (1967 TO DATE)
15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1068 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> fil medlin capl bios embase uspatfull
'BIOS' IS AN AMBIGUOUS FILE OR CLUSTER NAME
BIOSCIENCE - Bioscience Literature Cluster
BIOSIS - The BIOSIS Previews(R)/RN File 1969-present
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| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 5.92 | 6.07 |

FILE 'MEDLINE' ENTERED AT 17:12:28 ON 17 OCT 2001

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FILE 'BIOSIS' ENTERED AT 17:12:28 ON 17 OCT 2001


FILE 'EMBASE' ENTERED AT 17:12:28 ON 17 OCT 2001


FILE 'USPATFULL' ENTERED AT 17:12:28 ON 17 OCT 2001


=> s l1 or clenbuterol
L2 5083 L1 OR CLENBUTEROL

=> s spinal cord
L3 247825 SPINAL CORD

=> s l2 (s) l3
L4 23 L2 (S) L3

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5 11 DUP REM L4 (12 DUPLICATES REMOVED)

=> d ibib abs kwic 1-5

L5 ANSWER 1 OF 11 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2001:261570 BIOSIS
DOCUMENT NUMBER: PREV200100261570
TITLE: The therapeutic window for **clenbuterol** in **spinal cord** contusion injury is severity-dependent.
AUTHOR(S): Zeman, Richard J. (1); Peng, Hong (1); Feng, Yong (1); Couldwell, William T. (1); Etlinger, Joseph D. (1)
CORPORATE SOURCE: (1) Dept of Cell Biology and Anatomy, New York Medical College, Valhalla, NY, 10595 USA
SOURCE: FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A1151. print.
Meeting Info.: Annual Meeting of the Federation of American

Societies for Experimental Biology on Experimental Biology
2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English
AB An important goal of rehabilitation following **spinal cord** injury is recovery of locomotor function and muscular strength. Previously, we found that chronic treatment with the beta2-adrenoceptor agonist, **clenbuterol**, led to enhanced locomotor recovery that was associated with sparing of **spinal cord** tissue following contusion injury. In the present studies, to determine the therapeutic window for **clenbuterol** administration, single injections of **clenbuterol** were administered at timed intervals after injury. A model of **spinal cord** injury was used in which four graded levels of contusion injury were produced in rats with a weight-drop device. A vertical guide allows a 10g rod with 2.5-mm diameter tip to drop from preset heights of either 6.25, 12.5, 25 or 50-mm unto the exposed cord dura at the level of T10. Locomotor function was determined for six weeks following injury with the Basso, Beattic and Bresnahan (BBB) scale. Continuous treatment with **clenbuterol** (1.6 mg/kg/day, drinking H2O) caused substantial enhancement of recovery of locomotor function at the two most severe levels of injury (BBB scores, 10-12 vs 2-4, P<0.05, LSD). However, an increased dose (16 mg/kg/day) did not improve recovery. Interestingly, single injections of **clenbuterol** (2 mg/kg ip) immediately following injury with a 25-mm weight drop were as effective as chronic treatment. Similar locomotor recovery was observed with injection at 1 day postinjury although attenuation was observed at 2 and 3 days suggesting a time-window of 24 hour postinjury for optimal effectiveness. In contrast to the results with a 25-mm weight drop, single injections of **clenbuterol** immediately following a 50-mm drop did not improve recovery. These results suggest the possibility that additional injury mechanisms are activated by more severe injury, which require a wider therapeutic window in order to achieve recovery of locomotor function.
TI The therapeutic window for **clenbuterol** in **spinal cord** contusion injury is severity-dependent.
AB An important goal of rehabilitation following **spinal cord** injury is recovery of locomotor function and muscular strength. Previously, we found that chronic treatment with the beta2-adrenoceptor agonist, **clenbuterol**, led to enhanced locomotor recovery that was associated with sparing of **spinal cord** tissue following contusion injury. In the present studies, to determine the therapeutic window for **clenbuterol** administration, single injections of **clenbuterol** were administered at timed intervals after injury. A model of **spinal cord** injury was used in which four graded levels of contusion injury were produced in rats with a weight-drop device. A. . . Locomotor function was determined for six weeks following injury with the Basso, Beattic and Bresnahan (BBB) scale. Continuous treatment with **clenbuterol** (1.6 mg/kg/day, drinking H2O) caused substantial enhancement of recovery of locomotor function at the two most severe levels of injury. . . scores, 10-12 vs 2-4, P<0.05, LSD). However, an increased dose (16 mg/kg/day) did not improve recovery. Interestingly, single injections of **clenbuterol** (2 mg/kg ip) immediately following injury with a 25-mm weight drop were as effective as chronic treatment. Similar locomotor recovery. . . of 24 hour postinjury for optimal effectiveness. In contrast to the results with a 25-mm weight drop, single injections of **clenbuterol** immediately following a 50-mm drop did not improve recovery. These results suggest the possibility that additional injury mechanisms are activated. . .

L5 ANSWER 2 OF 11 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2001550030 IN-PROCESS
DOCUMENT NUMBER: 21469729 PubMed ID: 11586111
TITLE: Acute spinal cord injury, part II: contemporary pharmacotherapy.
AUTHOR: Dumont R J; Verma S; Okonkwo D O; Hurlbert R J; Boulos P T; Ellegala D B; Dumont A S
CORPORATE SOURCE: Faculty of Medicine, University of British Columbia, Vancouver, British Columbia, Canada.
SOURCE: CLINICAL NEUROPHARMACOLOGY, (2001 Sep-Oct) 24 (5) 265-79. Journal code: CNK; 7607910. ISSN: 0362-5664.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20011015
Last Updated on STN: 20011015

AB **Spinal cord** injury (SCI) remains a common and devastating problem of modern society. Through an understanding of underlying pathophysiologic mechanisms involved in the evolution of SCI, treatments aimed at ameliorating neural damage may be developed. The possible pharmacologic treatments for acute **spinal cord** injury are herein reviewed. Myriad treatment modalities, including corticosteroids, 21-aminosteroids, opioid receptor antagonists, gangliosides, thyrotropin-releasing hormone (TRH) and TRH analogs, antioxidants and free radical scavengers, calcium channel blockers, magnesium replacement therapy, sodium channel blockers, N -methyl-D-aspartate receptor antagonists, alpha-amino-3-hydroxy-5-methylisoxazole-4-propionic acid-kainate receptor antagonists, modulators of arachadonic acid metabolism, neurotrophic growth factors, serotonin antagonists, antibodies against inhibitors of axonal regeneration, potassium channel blockers (4-aminopyridine), paclitaxel, **clenbuterol**, progesterone, gabexate mesylate, activated protein C, caspase inhibitors, tacrolimus, antibodies against adhesion molecules, and other immunomodulatory therapy have been studied to date. Although most of these agents have shown promise, only one agent, methylprednisolone, has been shown to provide benefit in large clinical trials. Given these data, many individuals consider methylprednisolone to be the standard of care for the treatment of acute SCI. However, this has not been established definitively, and questions pertaining to methodology have emerged regarding the National Acute **Spinal Cord** Injury Study trials that provided these conclusions. Additionally, the clinical significance (in contrast to statistical significance) of recovery after methylprednisolone treatment is unclear and must be considered in light of the potential adverse effects of such treatment. This first decade of the new millennium, now touted as the Decade of the Spine, will hopefully witness the emergence of universal and efficacious pharmacologic therapy and ultimately a cure for SCI.

AB **Spinal cord** injury (SCI) remains a common and devastating problem of modern society. Through an understanding of underlying pathophysiologic mechanisms involved in the evolution of SCI, treatments aimed at ameliorating neural damage may be developed. The possible pharmacologic treatments for acute **spinal cord** injury are herein reviewed. Myriad treatment modalities, including corticosteroids, 21-aminosteroids, opioid receptor antagonists, gangliosides, thyrotropin-releasing hormone (TRH) and TRH analogs,. . . of arachadonic acid metabolism, neurotrophic growth factors, serotonin antagonists, antibodies against inhibitors of axonal regeneration, potassium channel blockers (4-aminopyridine), paclitaxel, **clenbuterol**, progesterone, gabexate mesylate, activated protein C, caspase inhibitors, tacrolimus, antibodies against adhesion molecules, and other immunomodulatory therapy have been studied. . . acute SCI.

However, this has not been established definitively, and questions pertaining to methodology have emerged regarding the National Acute **Spinal Cord** Injury Study trials that provided these conclusions. Additionally, the clinical significance (in contrast to statistical significance) of recovery after methylprednisolone. . .

L5 ANSWER 3 OF 11 USPATFULL

| | |
|---|---|
| ACCESSION NUMBER: | 2000:7338 USPATFULL |
| TITLE: | Method for treating scoliosis with .beta.2-adrenoceptor agonists |
| INVENTOR(S): | Etlinger, Joseph D., Mt. Kisco, NY, United States<br>Zeman, Richard J., New York, NY, United States |
| PATENT ASSIGNEE(S): | New York Medical College, Valhalla, NY, United States (U.S. corporation) |

| | NUMBER | KIND | DATE |
|---|---|---|---|
| PATENT INFORMATION: | US 6015837 | | 20000118 |
| APPLICATION INFO.: | US 1997-920018 | | 19970826 (8) |

| | NUMBER | DATE |
|---|---|---|
| PRIORITY INFORMATION: | US 1996-25147 | 19960829 (60) |

| | |
|---|---|
| DOCUMENT TYPE: | Utility |
| FILE SEGMENT: | Granted |
| PRIMARY EXAMINER: | Krass, Frederick |
| LEGAL REPRESENTATIVE: | Skadden, Arps, Slate, Meagher & Flom LLP, Sommer, Evelyn M. |
| NUMBER OF CLAIMS: | 12 |
| EXEMPLARY CLAIM: | 1 |
| NUMBER OF DRAWINGS: | 3 Drawing Figure(s); 4 Drawing Page(s) |
| LINE COUNT: | 573 |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of treating scoliosis by adminstering .beta..sub.2 adrenergic agonists in amounts sufficient to correct the condition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

DRWD FIG. 2. Dorsoventral radiograms of rats showing thoracic scoliosis 4 weeks after three-fourths **spinal cord** transection at T5 (1st panel on the left) or lumbar scoliosis after three-fourths transection at T11 (3rd panel). Radiograms shown in 2nd and 4th panels demonstrate that scoliosis is greatly reduced by **clenbuterol** after three-fourths transection at T5 and T11, respectively.

DETD An animal model of **spinal cord** injury was used to produce neuromuscular scoliosis for treatment with **clenbuterol** . This model uses an asymmetric injury to the **spinal cord** and thus is a valid model for scoliosis, which has been shown to result from a variety of procedures including. . . the dorsal columns or posterior horn (Barrios 1987, Pincott I 1982) and either the posterior or anterior roots of the **spinal cord** (Suk 1989, Pincott II 1984). In the present experiments, rat **spinal cords** were sectioned three-quarters of the way through, beginning on the right side, so that the left lateral columns remained intact. . .

DETD Unexpectedly, significant lateral displacement of the vertebrae was absent in groups of rats that were treated with **clenbuterol** for 4 weeks following identical three-quarter transection of the **spinal cord** at T5 or T11 (FIG. 1). The mechanism for this result is unknown, as was its existence prior to this. . .

L5 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2001 ACS

| | |
|---|---|
| ACCESSION NUMBER: | 1999:166517 CAPLUS |

DOCUMENT NUMBER: 130:205147
TITLE: Use of .beta.2-adrenoceptor agonists for the treatment of scoliosis
INVENTOR(S): Etlinger, Joseph D.; Zeman, Richard J.
PATENT ASSIGNEE(S): New York Medical College, USA
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9909966 | A1 | 19990304 | WO 1998-US12864 | 19980618 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US 6015837 | A | 20000118 | US 1997-920018 | 19970826 |
| AU 9879820 | A1 | 19990316 | AU 1998-79820 | 19980618 |

PRIORITY APPLN. INFO.: US 1997-920018 19970826
WO 1998-US12864 19980618

AB A method of treating scoliosis by administering .beta.2 adrenergic agonists in amts. sufficient to correct the condition is disclosed. Rat model of **spinal cord** injury was used to produce neuromuscular scoliosis for treatment with **clenbuterol** (I). I was added to the drinking water at a dose of 9 mg/L. The successful treatment of scoliosis in rats is reported.

REFERENCE COUNT: 4
REFERENCE(S):
(1) Alcon Laboratories Inc; WO 8910120 A 1989 CAPLUS
(2) Beecham Group PLC; EP 0085514 A 1983 CAPLUS
(3) The Rowett Research Institute; EP 0662324 A 1995 CAPLUS
(4) Zeman, R; Am J Physiol 1997, V272(4), PE712 CAPLUS

AB A method of treating scoliosis by administering .beta.2 adrenergic agonists in amts. sufficient to correct the condition is disclosed. Rat model of **spinal cord** injury was used to produce neuromuscular scoliosis for treatment with **clenbuterol** (I). I was added to the drinking water at a dose of 9 mg/L. The successful treatment of scoliosis in rats is reported.

L5 ANSWER 5 OF 11 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:68469 BIOSIS
DOCUMENT NUMBER: PREV200000068469
TITLE: **Clenbuterol** improves behavioral recovery following chronic **spinal cord** injury.
AUTHOR(S): Sayers, S. (1); Lucero, Y.; Mrkvika, R. (1); Khan, N. (1); Chhangani, V. (1); Chauhan, N. (1); Khan, T. (1)
CORPORATE SOURCE: (1) Research Service, Hines VA Hospital, Hines, IL USA
SOURCE: Society for Neuroscience Abstracts, (1999) Vol. 25, No. 1-2, pp. 493.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience, Part 1 Miami Beach, Florida, USA October 23-28, 1999 The Society for Neuroscience
. ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English

TI **Clenbuterol** improves behavioral recovery following chronic **spinal cord** injury.

=> FIL STNGUIDE
COST IN U.S. DOLLARS — SINCE FILE ENTRY: 15.55 — TOTAL SESSION: 21.62

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) — SINCE FILE ENTRY: -0.59 — TOTAL SESSION: -0.59

FILE 'STNGUIDE' ENTERED AT 17:14:08 ON 17 OCT 2001


FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Oct 12, 2001 (20011012/UP).

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=> d ibib abs kwic 6-11
YOU HAVE REQUESTED DATA FROM FILE 'MEDLINE, CAPLUS, BIOSIS, USPATFULL' - CONTINUE? (Y)/N:y

L5 ANSWER 6 OF 11 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 1999417619 MEDLINE
DOCUMENT NUMBER: 99417619 PubMed ID: 10486195
TITLE: **Clenbuterol**, a beta(2)-adrenoceptor agonist, improves locomotor and histological outcomes after **spinal cord** contusion in rats.
AUTHOR: Zeman R J; Feng Y; Peng H; Etlinger J D
CORPORATE SOURCE: Department of Cell Biology and Anatomy, New York Medical College, Valhalla, New York, 10595, USA.
SOURCE: EXPERIMENTAL NEUROLOGY, (1999 Sep) 159 (1) 267-73.
Journal code: EQF; 0370712. ISSN: 0014-4886.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199910
ENTRY DATE: Entered STN: 19991014
Last Updated on STN: 19991014
Entered Medline: 19991007

AB An important goal of rehabilitation following **spinal cord** injury is recovery of locomotor function and muscular strength. In the present studies, we determined whether the beta(2)-agonist, **clenbuterol**, can improve recovery of locomotor function following **spinal cord** injury. A model of **spinal cord** injury was examined in which four graded levels of contusion injury were produced in rats at the level of T10 with a weight-drop device. Locomotor recovery was determined with the Basso, Beattie, and Bresnahan (BBB) scale, which distinguishes between 22 progressive levels of recovery. As observed previously, recovery during the 6 weeks following injury was inversely related to the severity of

injury. However, **clenbuterol** caused substantial enhancement of recovery of locomotor function at the two most severe levels of injury (BBB scores 10-12 vs 2-4). In addition, the extent of recovery was directly related to sparing of **spinal cord** tissue at the contusion center in both untreated and **clenbuterol**-treated **spinal cords**. Optimization of beta(2)-agonist treatment may lead to a useful therapeutic modality for treatment of **spinal cord** contusion injury.
Copyright 1999 Academic Press.

TI **Clenbuterol**, a beta(2)-adrenoceptor agonist, improves locomotor and histological outcomes after **spinal cord** contusion in rats.

AB An important goal of rehabilitation following **spinal cord** injury is recovery of locomotor function and muscular strength. In the present studies, we determined whether the beta(2)-agonist, **clenbuterol**, can improve recovery of locomotor function following **spinal cord** injury. A model of **spinal cord** injury was examined in which four graded levels of contusion injury were produced in rats at the level of T10. . . recovery. As observed previously, recovery during the 6 weeks following injury was inversely related to the severity of injury. However, **clenbuterol** caused substantial enhancement of recovery of locomotor function at the two most severe levels of injury (BBB scores 10-12 vs 2-4). In addition, the extent of recovery was directly related to sparing of **spinal cord** tissue at the contusion center in both untreated and **clenbuterol**-treated **spinal cords**. Optimization of beta(2)-agonist treatment may lead to a useful therapeutic modality for treatment of **spinal cord** contusion injury.
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L5 ANSWER 7 OF 11 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:68448 BIOSIS
DOCUMENT NUMBER: PREV200000068448
TITLE: Muscle atrophy reversed by **clenbuterol** following chronic **spinal cord** injury.
AUTHOR(S): Khan, T. (1); Sayers, S. (1); Mrkvicka, R.; Chauhan, N. (1); Hussain, J.; Lucero, Y.
CORPORATE SOURCE: (1) Rehabilitation R and D Section, Hines VA Hospital, Hines, IL USA
SOURCE: Society for Neuroscience Abstracts, (1999) Vol. 25, No. 1-2, pp. 218.
Meeting Info.: 29th Annual Meeting of the Society for Neuroscience, Part 1 Miami Beach, Florida, USA October 23-28, 1999 The Society for Neuroscience . ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English
TI Muscle atrophy reversed by **clenbuterol** following chronic **spinal cord** injury.

L5 ANSWER 8 OF 11 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:46765 BIOSIS
DOCUMENT NUMBER: PREV199900046765
TITLE: **Clenbuterol** improves behavioral recovery after **spinal cord** injury.
AUTHOR(S): Sayers, S. (1); Lucero, Y.; Mrkvika, R. (1); Khan, N. (1); Chhangani, V. (1); Chauhan, N. (1); Khan, T. (1)
CORPORATE SOURCE: (1) Res. Serv., Hines V.A. Hosp., Hines, IL 60141 USA
SOURCE: Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 309.
Meeting Info.: 28th Annual Meeting of the Society for

Neuroscience, Part 1 Los Angeles, California, USA November 7-12, 1998 Society for Neuroscience . ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English
TI **Clenbuterol** improves behavioral recovery after **spinal cord** injury.

L5 ANSWER 9 OF 11 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 97287766 MEDLINE
DOCUMENT NUMBER: 97287766 PubMed ID: 9142894
TITLE: **Clenbuterol**, a beta2-adrenoceptor agonist, reduces scoliosis due to partial transection of rat **spinal cord**.
AUTHOR: Zeman R J; Zhang Y; Etlinger J D
CORPORATE SOURCE: Department of Cell Biology and Anatomy, New York Medical College, Valhalla 10595, USA.
SOURCE: AMERICAN JOURNAL OF PHYSIOLOGY, (1997 Apr) 272 (4 Pt 1) E712-5.
Journal code: 3U8; 0370511. ISSN: 0002-9513.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199706
ENTRY DATE: Entered STN: 19970620
Last Updated on STN: 19970620
Entered Medline: 19970606

AB Injury to the **spinal cord** often results in abnormal lateral curvature of the spine, or scoliosis, that is associated with neuromuscular weakness. The lateral curvature of the spine is thought to be a consequence of insufficient or asymmetrical loading of the vertebrae. To study neuromuscular scoliosis, an animal model of **spinal cord** injury was used in which the **spinal cord** was partially (3/4) transected, with the left lateral columns left intact. Partial transection of the **spinal cord** in the rat caused scoliosis that was maximal four to five vertebrae distal to the lesion site. As in previous experiments involving unilateral **spinal cord** lesions, the scoliotic curves were convex on the weakened side. Subtotal transection at T5 or T11 resulted in lateral displacement of vertebrae T9-T12 or L2-L5, respectively, of up to 11 mm. Interestingly, this vertebral displacement is greatly reduced by **clenbuterol**, a beta2-adrenoceptor agonist that has been found to retard loss of muscle contractility and bone mineralization due to denervation. Together these results suggest that stimulation of beta2-receptors opposes vertebral unloading due to neuromuscular weakness and thereby acts as a countermeasure to scoliosis.
TI **Clenbuterol**, a beta2-adrenoceptor agonist, reduces scoliosis due to partial transection of rat **spinal cord**.
AB Injury to the **spinal cord** often results in abnormal lateral curvature of the spine, or scoliosis, that is associated with neuromuscular weakness. The lateral curvature. . . to be a consequence of insufficient or asymmetrical loading of the vertebrae. To study neuromuscular scoliosis, an animal model of **spinal cord** injury was used in which the **spinal cord** was partially (3/4) transected, with the left lateral columns left intact. Partial transection of the **spinal cord** in the rat caused scoliosis that was maximal four to five vertebrae distal to the lesion site. As in previous experiments involving unilateral **spinal cord** lesions, the scoliotic curves were convex on the weakened side. Subtotal transection at T5 or T11 resulted in lateral displacement of vertebrae T9-T12 or L2-L5, respectively, of up to 11 mm. Interestingly,

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L5 ANSWER 10 OF 11 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 91336405 MEDLINE
DOCUMENT NUMBER: 91336405 PubMed ID: 1678583
TITLE: Clenbuterol, a beta 2-receptor agonist, reduces net bone loss in denervated hindlimbs.
AUTHOR: Zeman R J; Hirschman A; Hirschman M L; Guo G; Etlinger J D
CORPORATE SOURCE: Department of Cell Biology and Anatomy, New York Medical College, Valhalla 10595.
SOURCE: AMERICAN JOURNAL OF PHYSIOLOGY, (1991 Aug) 261 (2 Pt 1) E285-9.
Journal code: 3U8; 0370511. ISSN: 0002-9513.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199109
ENTRY DATE: Entered STN: 19911006
Last Updated on STN: 19950206
Entered Medline: 19910919

AB **Clenbuterol** treatment for several weeks prevented up to one-third of the reduction in mineralization of femurs and tibias caused by sectioning of the sciatic nerve in young rats. The normalizing effect of **clenbuterol** on bone mineral content was directly proportional to similar alterations in muscle mass, which in turn could be abolished by ablation of the triceps surae or hindlimb unweighting and reduced by hypophysectomy. In contrast to the effects of inactivity, ovariectomy caused small reductions (2-4%) in bone density that were not affected by **clenbuterol** and were not accompanied by changes in ash weight. Together, our results suggest that the ability of beta 2-agonists to retard the loss in net muscle mass and enhance contractile tension can oppose net bone loss caused by denervation. Increases in contractile tension caused by beta 2-agonists may enhance the utility of exercise or electrical stimulation as countermeasures for the effects of scoliosis, prolonged bed rest, **spinal cord** injury, or weightlessness in space on bone mass.

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L5 ANSWER 11 OF 11 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 91079204 MEDLINE
DOCUMENT NUMBER: 91079204 PubMed ID: 2258412
TITLE: Determination of clenbuterol in bovine plasma and tissues by gas chromatography-negative-ion chemical ionization mass spectrometry.
AUTHOR: Girault J; Fourtillan J B
CORPORATE SOURCE: CEMAF S.A., Poitiers, France.
SOURCE: JOURNAL OF CHROMATOGRAPHY, (1990 Sep 28) 518 (1) 41-52.

Journal code: HQF; 0427043. ISSN: 0021-9673.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199101
ENTRY DATE: Entered STN: 19910322
Last Updated on STN: 19910322
Entered Medline: 19910131

AB A highly sensitive and specific assay was developed for the determination of **clenbuterol** in bovine plasma and tissues. **Clenbuterol** and the internal standard [2H9]**clenbuterol** were measured by gas chromatography-negative-ion chemical ionization mass spectrometry with methane as the reagent gas. Bovine tissues including muscle, liver, heart, kidney, lung, suet, brain, **spinal cord** and thymus were ground in a buffer of pH 7 and then extracted using ethyl acetate. After two subsequent purification steps, the cleaned-up organic extract was derivatized with pentafluoropropionic anhydride. The mass spectrometer was set to monitor the abundant ions m/z 368 and 377 of the perfluoroacyl derivatives. This assay was performed with 1 ml of plasma or 0.2 g of tissue. The feasibility of this method was demonstrated by the determination of **clenbuterol** residues as the femtomole level in a variety of tissues.

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=> log h

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